

PATENT

1999B062AU
Response to OA dated 11/1/05
Response dated 3/1/06

IN THE CLAIMS:

- Please cancel claims 4, 7, 19 and 22 without prejudice and amend the claims as follows:
1. (Currently amended) An inner tube comprising a blend comprising:
at least 15 parts per hundred rubber [[a]] halogenated isobutylene-co-alkylstyrene polymer; and
a second rubber component, wherein the halogen is present from 0.1 to 3.0 mol% relative to the total amount of the polymer.
 2. (Original) The inner tube of Claim 1, wherein the halogenated isobutylene-co-alkylstyrene is brominated isobutylene-co-methylstyrene polymer.
 3. (Original) The inner tube of Claim 1, wherein the halogenated isobutylene-co-alkylstyrene is brominated isobutylene-co-paramethylstyrene polymer.
 4. (Cancelled)
 5. (Original) The inner tube of Claim 1, comprising at least 25 parts per hundred rubber halogenated isobutylene-co-alkylstyrene polymer.
 6. (Original) The inner tube of Claim 1, comprising at least 40 parts per hundred rubber halogenated isobutylene-co-alkylstyrene polymer.
 7. (Cancelled)
 8. (Original) The inner tube of Claim 1, further comprising a cure package.
 9. (Original) The inner tube of Claim 8, further comprising a vulcanizing agent, a retarder, a filler, or blends thereof.

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10. (Currently amended) The inner tube of Claim 1, wherein the second rubber component is selected from the group consisting of natural rubber, polyisoprene rubber, poly(styrene-co-butadiene) rubber (SBR), polybutadiene rubber (BR), butyl rubber, poly(isoprene-co-butadiene) rubber (IBR), styrene-isoprene-butadiene rubber (SIBR), polysulfide, nitrile rubber, propylene oxide polymers, semi-crystalline copolymer (SCC), halogenated star-branched butyl rubber, brominated butyl rubber, chlorinated butyl rubber, star-branched butyl (polyisobutylene/isoprene copolymer) rubber, star-branched halogenated (brominated or chlorinated) butyl (polyisobutylene/isoprene copolymer) rubber, poly(isobutylene-co-methylstyrene), and halogenated poly(isobutylene-co-methylstyrene) the halogen is present from 0.1 to 3.0 mol% relative to the total amount of the polymer.
11. (Currently amended) The inner tube of Claim [[10]] 1, wherein the halogen is bromine.
12. (Currently amended) The inner tube of Claim [[10]] 1, wherein the halogen is chlorine.
13. (Currently amended) An inner tube comprising a blend comprising:
at least 15 parts per hundred rubber [[a]] halogenated isobutylene-co-allylstyrene isobutylene-co-methylstyrene polymer; and
a second rubber component, wherein the halogen is present from 0.1 to 3.0 mol% relative to the total amount of the polymer.
14. (Currently amended) The inner tube of Claim 13, where the second rubber component is selected from the group consisting of natural rubber, polyisoprene rubber, poly(styrene-co-butadiene) rubber (SBR), polybutadiene rubber (BR), butyl rubber, poly(isoprene-co-butadiene) rubber (IBR), styrene-isoprene-butadiene rubber (SIBR), polysulfide, nitrile rubber, propylene oxide polymers, semi-crystalline copolymer (SCC), halogenated star-branched butyl rubber, brominated butyl rubber, chlorinated butyl rubber, star-branched butyl (polyisobutylene/isoprene copolymer) rubber, star-branched halogenated (brominated or chlorinated) butyl

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(polyisobutylene/isoprene copolymer) rubber, poly(isobutylene-co-methylstyrene), and halogenated poly(isobutylene-co-methylstyrene).

15. (Currently amended) The inner tube of Claim 13, wherein the halogenated isobutylene-co-~~allylstyrene~~ methylstyrene polymer is brominated isobutylene-co-methylstyrene polymer.
16. (Currently amended) The inner tube of Claim 13, wherein the halogenated isobutylene-co-~~allylstyrene~~ methylstyrene polymer is brominated isobutylene-co-*paramethylstyrene* polymer.
17. (Currently amended) The inner tube of Claim 13, wherein the second rubber component is an isobutylene-based rubber.
18. (Original) The inner tube of Claim 17, wherein the isobutylene based rubber comprises at least 80 weight % isobutylene.
19. (Cancelled)
20. (Currently amended) The inner tube of Claim 13, comprising at least 25 parts per hundred rubber halogenated isobutylene-co-~~allylstyrene~~ methylstyrene polymer.
21. (Currently amended) The inner tube of Claim 13, comprising at least 40 parts per hundred rubber halogenated isobutylene-co-~~allylstyrene~~ methylstyrene polymer.
22. (Cancelled)
23. (Original) The inner tube of Claim 13, wherein the blend further comprises a cure package.
24. (Original) The inner tube of Claim 23, wherein the blend further comprises a vulcanizing agent, a retarder, a filler, or blends thereof.

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25. (Currently amended) The inner tube of Claim 13, wherein the halogen is present from 0.25 to 2.0 ~~0.1 to 3.0~~ mol% relative to the total amount of the polymer.
26. (Original) The inner tube of Claim 25, wherein the halogen is bromine.
27. (Original) The inner tube of Claim 25, wherein the halogen is chlorine.
28. (Currently amended) A tire assembly comprising:
 - a) a tire; and
 - b) an inner tube comprising a blend comprising at least 15 parts per hundred rubber [[a]] halogenated isobutylene-co-alkylstyrene polymer; and a second rubber component, wherein the halogen is present from 0.1 to 3.0 mol% relative to the total amount of the polymer.
29. (Original) The tire assembly of Claim 28, wherein the halogenated isobutylene-co-alkylstyrene polymer is brominated isobutylene-co-methylstyrene polymer.
30. (Original) The tire assembly of Claim 28, wherein the halogenated isobutylene-co-alkylstyrene polymer is brominated isobutylene-co-paramethylstyrene polymer.
31. (Original) The tire assembly of Claim 28, wherein the blend further comprises ethylene-propylene-diene rubber (EPDM).
32. (Currently amended) The tire assembly of Claim 28, wherein where the blend further comprises a second rubber component is selected from the group consisting of natural rubber, polyisoprene rubber, poly(styrene-co-butadiene) rubber (SBR), polybutadiene rubber (BR), butyl rubber, poly(isoprene-co-butadiene) rubber (IBR), styrene-isoprene-butadiene rubber (SIBR), polysulfide, nitrile rubber, propylene oxide polymers, semi-crystalline copolymer (SCC), halogenated star-branched butyl rubber, brominated butyl rubber, chlorinated butyl rubber, star-branched butyl (polyisobutylene/isoprene copolymer) rubber, star-branched halogenated (brominated

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or chlorinated) butyl (polyisobutylene/isoprene copolymer) rubber, poly(isobutylene-co-methylstyrene), and halogenated poly(isobutylene-co-methylstyrene).

33. (Currently amended) The tire assembly of Claim 28, wherein the ~~blend further~~ ~~comprises a second~~ rubber component comprises isobutylene-based rubber.
34. (Currently amended) The tire assembly of Claim 33, wherein the ~~second~~ isobutylene-based rubber comprises a copolymer of isobutylene/isoprene.
35. (Currently amended) The tire assembly of Claim 28, wherein the halogen is present from 0.2 to 2.0 ~~0.1 to 3.0~~ mol% relative to the total amount of polymer.
36. (Original) The tire assembly of Claim 35, wherein the halogen is bromine.
37. (Original) The tire assembly of Claim 35, wherein the halogen is chlorine.